

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

a TS1577
.A3452

U.S. DEPT. OF AGRICULTURE
NAT'L AGTIC. LIBRARY
SERIES

REPORT NO. 8

JAN 25 '74

PROCUREMENT SECTION
CURRENT SERIAL RECORDS

Cotton Fiber and Processing Test Results

CROP of

1970



Consumer and Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 November 27, 1970

This is the eighth of a series of reports of fiber and processing test results from the 1970 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as AID 344, Summary of "Cotton Fiber and Processing Test Results, Crop of 1969, May 1970." These reports are published by the Standardization Section, Cotton Division, Consumer and Marketing Service, U. S. Department of Agriculture, Memphis, Tennessee.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1970

Discussion of Test Results

Cotton testing laboratories of the Consumer and Marketing Service, USDA, report that average fibers are finer than last year for all medium staple samples tested through November 20, 1970. The remainder of the fiber properties are about the same as a year ago. Yarns spun from these samples show less strength with other yarn quality factors about the same. Average spinning potential yarn number is higher than a year ago.

Southwestern short staple samples are longer, coarser and stronger at 1/8-inch gage strength. Picker and card waste is lower. Yarns spun from these samples are stronger with the other yarn quality factors about the same as last year. Average spinning potential yarn number is higher, reflecting the longer fibers.

Southeastern medium staple samples are shorter, finer and show less picker and card waste than a year ago. Yarns spun from these samples show fewer imperfections with the other yarn quality factors about the same.

South Central medium staple samples are shorter and weaker than last year. Yarns spun from these samples are weaker with slightly lower appearance grades.

Southwestern medium staple samples are longer, stronger at 1/8-inch gage and show a higher Shirley Analyzer nonlint content than a year ago. Yarns spun from these samples are weaker with lower appearance grades and more imperfections. Average spinning potential yarn number is higher than a year ago, reflecting the longer fibers.

Western medium staple samples are finer, weaker and show a lower picker and card waste compared to last year. Yarn quality is about the same. Average spinning potential yarn number is higher.

Western long staple samples are finer and stronger than a year ago. Yarns show poorer appearance grades and more imperfections.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through November 20, 1970 1/

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.	
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			G/tex	Pct.	Skein str.		Appear- ance
				Inches			Pct.	Rdg.				Mpsi	
		No.	22s		Carded	Yarn			Yarn No.				
<u>Short Staple:</u>													
Southwest	22	0.90	46	4.3	88	19.8	3.4	7.0	88	118	25	38	
1969	20	0.95	46	4.5	87	21.2	3.7	6.4	91	116	25	44	
<u>Medium Staple:</u>													
Southeast	67	1.10	46	4.7	83	23.1	3.2	7.1	104	102	21	60	
1969	68	1.08	45	4.5	83	22.9	3.5	6.6	103	102	17	61	
South Central	148	1.10	45	4.7	85	22.9	2.9	6.4	108	113	19	61	
1969	87	1.08	45	4.7	82	22.4	2.9	6.0	102	110	19	62	
Southwest	33	1.05	46	4.5	87	22.1	2.7	6.2	109	122	19	59	
1969	41	1.09	46	4.5	86	22.7	3.2	6.1	103	118	23	65	
West	29	1.10	45	4.5	95	25.5	2.9	6.3	121	115	22	66	
1969	33	1.10	45	4.3	93	25.0	2.6	5.4	118	117	21	71	
U.S. Average	277	1.09	45	4.7	86	23.1	2.9	6.5	109	112	20	61	
1969	229	1.08	45	4.5	85	23.0	3.1	6.1	105	110	19	64	
Significant dif- ference 2/		0.02	2	0.2	2	0.5	0.5	0.5	4(22s) 2(50s)	5	2	3	

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through November 20, 1970
1/ (Continued)

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results				
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.	
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appear- ance	Imperf- ections		
	No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.	
									22s Carded Yarn				
<u>Long Staple:</u> Southeast 1970 South Central 1970 West 1969 1970	12	1.15	45	4.7	82	23.4	4.6	8.6	110	103	21	66	
	3	1.15	42	4.7	86	23.3	4.4	8.9	100	93	27	61	
	5	1.16	45	4.1	93	25.7	2.9	7.5	134	102	19	76	
	7	1.17	45	3.8	95	27.8	3.0	7.4	136	91	32	76	
	Array												
<u>Extra Long Staple:</u> West 1969 1970	1	1.41	31	4.0	101	32.0	2.8	7.0	67	110	1		
	2	1.52	30	3.9	98	34.9	2.2	6.7	67	115	2		
50's Combed Yarn													
Significant dif- ference 2/		0.02	2	0.2	2	0.5	0.5	0.5	4(22s)	5	2	3	
									2(50s)				

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1970

Production Area, Classification				Fiber Test Results								Processing Test Results - Carded Yarns											
Sample Number		Digital Fibrograph	Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Poten- tial			
				Zero Gage	1/8" Gage		Gra	Yel	8s or 74 tx	22s or 27 tx		8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx						
No	Grade	Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No			
SOUTHWESTERN AREA NORTHWEST TEXAS																							
HASKELL																							
1	MID LT SP	32	30	0.91	45	5.1	84	20.4	7.1	2.8	2	4	95 PERCENT	84	285	6.3	5.6	120	120	50	30	37	
LITTLEFIELD																							
1	SIM LT SP	42	29	0.89	46	4.6	90	20.4	6.3	3.9	3	4	98 PERCENT	91	302	6.3	5.5	120	110	49	29	41	
MORTON																							
1	SIM	41	29	0.89	46	5.2	87	20.9	6.4	2.7	3	4	80 PERCENT	85	282	5.9	5.2	120	120	55	28	37	
PETERSBURG																							
1	SIM	41	32	0.97	48	4.3	90	22.7	7.4	3.2	2	4	70 PERCENT	100	339	7.2	5.9	120	110	63	35	55	

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1970

Production Area, Classification				Fiber Test Results						Processing Test Results - Carded Yarns											
Sample Number			Digital Fibrograph	Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent-ial	
No	Grade	Stple	2.5% span	In	Pct	Rdg	Mpsi	G/tex	Pct	Gra	Yel	Pct	22s or 27 tx	50s or 12 tx	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	
SOUTHEASTERN AREA																					No
ALABAMA																					No
HOLTVILLE		51	35	1.13	43	4.0	82	COKER 417	5.4	3.0	3	3	99 PERCENT	39	6.8	5.5	90	70	29	19	64
LA FAYETTE		52	34	1.08	45	4.3	78	DIXIE KING II	5.4	4.1	4	3	80 PERCENT	32	6.5	4.9	100	80	19	11	58
RED LEVEL		52	34	1.03	45	4.6	82	COKER 100A	5.3	3.7	4	3	80 PERCENT	26	5.8	4.0	100	80	24	16	52
ST. CLAIR		51	34	1.09	45	4.4	82	COKER 201	5.0	3.8	2	3	100 PERCENT	33	6.0	4.7	100	80	26	18	58
SYLACAUGA		41	33	1.03	44	4.5	83	DIXIE KING II	5.0	2.7	2	3	100 PERCENT	31	6.2	4.5	100	70	22	18	58
GEORGIA																					
COLBERT		42	34	1.09	46	4.6	80	COKER 201	5.7	3.3	2	3	100 PERCENT	35	6.7	5.1	110	90	17	14	61
PINEHURST		51	34	1.15	46	4.3	83	COKER 417	5.0	3.5	3	3	100 PERCENT	39	6.8	5.3	100	90	16	13	64
TENNVILLE		52	33	1.06	45	4.8	85	COKER 201	5.3	4.9	4	3	90 PERCENT	28	6.0	4.4	90	70	22	18	55
NORTH CAROLINA																					
LAURINBURG		51	34	1.04	46	4.3	82	MCNATR 1032B	5.6	5.2	3	2	100 PERCENT**	35	6.5	5.2	100	80	19	20	56
SOUTH CENTRAL AREA																					

* 100 percent selected for tests, less than 100 percent in the area.

1/ Reduced from 41 because of grass.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1970 ----(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential
				2.5% span	Unif.		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		22s or 27 tx	50s or 12 tx	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
SOUTH CENTRAL AREA---(Continued)																							
ARKANSAS---(Continued)																							
HUGHES																							
2	SIM	41	34	1.09	44	4.5	82	21.2	6.9	3.0	3	4	100 PERCENT	6.3	95	32	5.8	4.3	110	80	30	25	60
LEACHVILLE																							
3	LM	51	34	1.09	46	4.0	88	22.0	6.5	2.8	4	2	100 PERCENT	6.3	100	35	5.3	4.0	100	80	35	28	65
BRYCOT 1																							
MARKED TREE																							
2	SIM	41	35	1.09	47	4.9	78	21.2	7.2	3.2	3	3	90 PERCENT	6.2	97	33	5.6	4.0	120	100	20	15	58
STONEVILLE 213																							
LOUISIANA																							
LAFAYETTE																							
2	LM	51	34	1.10	46	4.5	82	21.5	5.9	3.4	4	3	85 PERCENT	6.2	96	32	5.3	3.7	120	90	25	17	65
STONEVILLE 213																							
TRANSYLVANIA																							
2	SIM LT SP	42	34	1.13	44	4.3	78	21.8	7.7	3.2	3	3	100 PERCENT	6.4	104	37	6.1	4.8	110	90	32	22	74
DELTAPINE 16																							
MISSISSIPPI																							
BRUCE																							
3	LM	51	33	1.04	44	4.6	83	22.1	5.4	2.8	4	3	80 PERCENT	6.0	94	29	6.5	4.7	100	80	18	13	53
STONEVILLE 213																							
CLARKSDALE																							
2	LM	51	35	1.08	44	4.6	78	23.9	5.6	4.1	3	2	100 PERCENT	7.2	95	31	6.4	5.0	100	80	35	26	53
STONEVILLE 213																							
HOLLY SPRINGS																							
2	SIM	41	35	1.13	45	4.6	78	22.9	6.7	3.3	2	3	95 PERCENT	5.7	103	36	7.3	5.9	100	90	17	13	59
DELTAPINE 16																							
INDIANOIA																							
2	LM	51	35	1.10	46	4.7	91	23.7	4.5	4.1	4	3	100 PERCENT	7.4	95	31	5.8	4.3	100	80	25	20	57
DIXIE KING II																							
INDIANOLA																							
2	SIM	41	35	1.10	46	4.8	83	22.1	5.4	3.1	3	3	100 PERCENT	6.1	98	32	6.3	4.7	90	80	22	19	55
STONEVILLE 213																							
LAKE CORMORANT																							
2	SIM	41	35	1.14	46	4.5	78	23.2	6.6	3.2	2	2	100 PERCENT	6.2	106	37	7.5	5.8	100	80	18	15	61
DELTAPINE 16																							
PANTHER BURN																							
2	SIM	41	35	1.14	44	4.2	78	23.2	6.3	3.0	2	2	100 PERCENT	6.0	112	41	7.2	5.8	100	80	22	15	67
DELTAPINE 16																							

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1970 --- (Continued)

Production Area, Classification & Sample Number				Fiber Test Results						Processing Test Results - Carded Yarns													
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste		Strength		Elongation		Appearance Index		Imprfct'ns		Spin- Poten- tial
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel	Pct	Pct	lbs	lbs	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
SOUTH CENTRAL AREA---(Continued)																							
MISSISSIPPI---(Continued)																							
TRALAKE																							
2 SIM	41	35	1.12	42		4.0	82	24.0	6.7	DELTA PINE 16	2.6	2	2		100 PERCENT	38	7.5	5.6	100	80	21	15	60
MISSOURI																							
SIXESTON																							
2 SIM LT SP	42	34	1.08	45		4.4	78	23.3	7.2	STONEVILLE 213	3.8	3	3		95 PERCENT	34	5.9	4.6	120	90	34	20	62
TENNESSEE																							
BOLIVER																							
3 SIM	41	34	1.09	45		4.6	78	22.4	7.2	DELTA PINE 16	2.0	2	2		100 PERCENT	37	7.6	5.9	100	90	16	12	60
DYERSBURG																							
2 SIM LT SP	42	34	1.06	44		4.7	80	22.5	5.6	STONEVILLE 213	2.7	3	4		90 PERCENT	31	6.5	4.8	100	90	16	13	58
LEXINGTON																							
2 SIM LT SP	42	34	1.04	46		4.3	80	21.1	5.3	DIXIE KING II	3.5	3	3		100 PERCENT	30	6.2	4.5	100	70	24	20	52
MILLINGTON																							
2 SIM	41	34	1.05	46		4.3	79	21.2	5.3	REX SMOOTH LEAF	2.3	3	3		90 PERCENT	29	6.2	4.8	90	70	22	20	52
WYNNBURG																							
2 SIM	41	34	1.12	47		4.7	80	22.8	6.3	DELTA PINE 16	2.2	2	3		90 PERCENT	36	7.1	5.4	100	80	18	14	58
SOUTHWESTERN AREA																							
CENTRAL TEXAS																							
BRYAN																							
3 SIM LT SP	42	34	1.09	44		4.7	82	21.9	6.5	STONEVILLE 213	2.3	4	4		100 PERCENT	29	5.4	3.8	110	90	30	28	56
NAVASOTA																							
3 SIM	41	34	1.09	44		4.6	84	22.3	7.0	DELTA PINE 16	2.4	2	2		100 PERCENT	32	5.5	3.9	120	90	20	20	59
SUGAR LAND																							
3 IM SP	53	34	1.08	44		4.4	91	19.6	4.9	STONEVILLE 7A	7.6	6	4		100 PERCENT	22	4.1	2.3	100	80	45	37	48
NORTHWEST TEXAS																							
LUBBOCK																							
1 IM	51	33	1.05	43		4.1	86	23.8	6.4	COKER 4104	4.0	3	3		100 PERCENT	34	5.7	4.1	100	70	49	36	56
ROFESVILLE																							
1 MID	31	33	1.04	45		3.6	89	23.3	6.9	LOCKETT 4789A	2.0	2	4		100 PERCENT	41	6.3	4.9	110	80	30	25	68

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1970---(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade & Code		Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- tial			
	Name	Code		2.5% span	Unif.		Zero Gage	1/8" Gage			Mpsi	G/tex		Pct	No	Yel	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx	22s or 27 tx	50s or 12 tx
SOUTHWESTERN AREA---(Continued)																									
NORTHWEST TEXAS---(Continued)																									
SMYER																									
1	SIM	41	31	0.98	45	4.5	91	PAYMASTER	22.2	6.5	3.4	3	4	75 PERCENT	5.9	101	31	5.5	3.5	120	90	25	20	53	
OKLAHOMA																									
ALTUS																									
2	SIM	41	35	1.16	44	4.2	92	DELTAPINE	16	23.7	6.6	2.9	2	2	90 PERCENT	6.3	107	38	5.7	4.3	110	80	30	27	74
WESTERN AREA																									
CALIFORNIA																									
BAKERSFIELD																									
2	SIM	41	36	1.14	44	3.8	98	ACALA SJ-1	26.3	5.4	3.1	2	3	100 PERCENT	6.1	128	48	5.7	4.6	110	80	23	19	79	
BUTTONWILLOW																									
2	MID	31	36	1.11	45	4.4	95	ACALA SJ-1	26.4	5.8	2.6	1	3	100 PERCENT	5.4	120	44	5.7	4.3	120	90	19	15	70	
CHOMCHILLA																									
1	SIM	41	36	1.12	47	4.6	100	ACALA SJ-1	26.4	5.4	2.2	1	3	99 PERCENT	4.6	132	50	5.8	4.5	130	100	14	9	80	
COALINGA																									
1	MID	31	36	1.11	46	4.4	100	ACALA SJ-1	26.6	5.6	1.9	1	3	100 PERCENT	5.3	124	46	5.7	4.3	130	90	19	12	80	
CORCORAN																									
2	MID	31	36	1.10	46	4.3	102	ACALA SJ-1	26.7	5.6	2.2	2	3	100 PERCENT	5.2	121	46	5.6	4.5	120	90	14	10	79	
FIREBAUGH																									
1	MID	31	36	1.09	46	4.1	91	ACALA 4-42	25.9	6.6	2.0	1	3	100 PERCENT	5.7	124	45	6.0	4.8	120	100	15	10	76	
HANFORD																									
1	MID	31	35	1.07	45	4.1	100	ACALA SJ-1	25.6	5.1	2.0	1	3	98 PERCENT	4.3	124	46	5.4	4.3	120	90	14	12	77	
LOST HILLS																									
2	MID	31	36	1.12	44	4.2	98	ACALA SJ-1	25.6	5.6	2.5	1	3	100 PERCENT	4.8	128	48	5.7	4.3	120	90	18	14	78	
SAN JOAQUIN																									
1	MID	31	35	1.06	47	4.4	102	ACALA 4-42	26.8	5.6	2.6	1	3	100 PERCENT**	5.3	129	47	5.4	4.3	110	90	24	16	76	
TULARE																									
2	SIM	41	36	1.12	46	4.3	100	ACALA SJ-1	24.9	5.4	3.5	2	3	100 PERCENT	5.9	127	46	5.7	4.4	110	100	18	14	84	

* 100 percent selected for tests, less than 100 percent in the area.

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1970 --- (Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns														
No	Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potential						
				2.5% span	Unif.		Zero Gage	1/8" Gage			Mpsi	G/tex		Pct	Pct	Gra	Yel	Pct	Pct	Lbs	Lbs		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx
WESTERN AREA---(Continued)																												
CALIFORNIA---(Continued)																												
VISALIA																												
1	MID	31	36	1.12	45	4.2	101	27.5	5.4	1.9	1	3	100 PERCENT	49	5.5	4.4	120	100	17	15	79							
2	MID	31	35	1.11	46	4.3	99	25.6	5.3	2.2	2	3	4.4	122	45	5.4	110	90	20	16	73							
WEST TEXAS																												
PECOS																												
1	SIM	41	35	1.12	44	3.8	83	23.3	8.3	2.5	2	3	5.1	110	39	6.7	5.2	100	80	24	20	69						
STONEVILLE 7A																												
2	SIM	41	35	1.11	44	4.0	82	20.8	7.4	2.6	2	3	6.0	102	35	6.7	5.1	110	80	39	26	64						

* 100 percent selected for tests, less than 100 percent in the area.

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1970

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
No		Grade	Stple	Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfect'ns		
				UQL	CV		Zero	1/8" Gage			Gra	Yel			Lbs	tx	50s or 12 tx	7 tx	50s or 12 tx	7 tx	50s or 12 tx	7 tx	50s or 12 tx
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
AREA																							
WESTERN																							
ARIZONA																							
SAFFORD																							
1	3	46		1.56	29	3.9	98	35.0	7.6	2.6	4	5	6.7	15.8	67	36	6.3	5.3	110	120	3	3	
75 PERCENT																							
PIMA S-4																							
WEST TEXAS																							
PECOS																							
1	3	44		1.47	30	3.9	99	34.8	7.1	1.8	4	5	6.7	19.2	59	37	6.2	5.2	120	120	2	1	
85 PERCENT																							
PIMA S-4																							

